

**REMARKS**

Claims 1-5, 16, 33 and 40-46 are pending and are rejected. Claims 1, 33, and 40 are amended. Claims 4, 5, 6-32, 34-39, 41, and 43-46 are canceled without prejudice. The amendments are fully supported in the application as filed and do not introduce new matter (e.g. at least at page 9, line 25 to page 10 line 1, and page 10, lines 9-12).

Applicants thank the Examiner for the courtesy of the telephone interview on February 3, 2005 with the undersigned representative. The claims have been amended as suggested by the Examiner, which the Examiner indicated would result in the issuance of a Notice of Allowance.

The Examiner's reference to claims 1-4 being pending is believed to be incorrect, consistent with March 19, 2004 Office Action, and June 21, 2004 and August 26, 2004 Amendments.

Applicant respectfully requests entry of this Amendment, which is believed to completely respond to all rejections and put the application in condition for allowance. Applicant has retained the Examiner's paragraph numbering.

**IN THE SPECIFICATION**

The Examiner notes that the application serial number on page 9 is missing.

The specification was previously amended to provide the serial number (see page 9, Election and Preliminary Amendment, February 6, 2004) and applicant respectfully requests that it be entered. Copies of the Election and Preliminary Amendment and facsimile transmission receipt are attached.

**IN THE CLAIMS****CLAIM REJECTIONS UNDER 35 U.S.C. §102**

4. Claims 1, 4, and 40-46 are rejected under 35 U.S.C. §102(a and/or e) as anticipated by Tuurenhout U.S. Patent No. 6,231,741.

Applicant respectfully disagrees that the limitation of an apparatus to prepare a "biocompatible matrix" does not distinguish Tuurenhout. The technical field of the claimed apparatus is formation of a medical device for implantation and blood-contact in humans. The term "biologically compatible" is a common term in the field of medicine that is not applicable to the field of analytical biochemistry, including Tuurenhout's polyacrylamide gel electrophoresis (PAGE) apparatus. The PAGE apparatus is used for separation of molecules by charge and mass. In fact, polyacrylamide is highly carcinogenic, and contains warnings to avoid contact with skin and eyes. Similarly, the term "matrix" is known in the art of medical devices to mean a fabric or polymer for medical implantation in humans.

However, to advance prosecution, applicant has amended independent claims 1 and 40 to recite additional limitations that more clearly distinguish over Tuurenhout. In particular, claims 1 and 40 have been amended to specifically recite that the chamber is defined by top and bottom metal surfaces. Tuurenhout does not disclose metal surfaces, but instead discloses only glass surfaces ("FIG. 1 shows two glass plates 1 and 2..." (column 6, lines 37-39) because metal plates are incompatible with PAGE as known to one skilled in the art. Further, the Examiner previously stated that Tuurenhout does not disclose metal surfaces ("However, Tuurenhout et al. do not recite a heat conductive material that is metal." Office Action mailed November 1, 2004,

page 5). Consequently, amended independent claims 1 and 40 admittedly define over Tuurenhout under 35 U.S.C. §102 and are allowable. For at least these reasons, dependent claims 2, 3, and 42 are also allowable.

#### **CLAIM REJECTIONS UNDER 35 U.S.C. §103**

7. Claim 5 is rejected under 35 U.S.C. §103(a) as obvious over Tuurenhout. Although claim 5 is canceled, rendering the rejection moot, its limitation of a metal is included in independent claim 1.

Applicant respectfully asserts that it would not be obvious to provide a metal surface in Tuurenhout. There is no teaching, motivation, or suggestion in Tuurenhout to provide a metal surface. Further, Tuurenhout teaches away from a metal surface. Tuurenhout is directed to electrophoresis (Title: Gel Cassette and Electrophoresis Device) such that electricity is required. Tuurenhout's device provides a voltage to buffer that is in contact with glass plates sandwiching a gel (Tuurenhout column 6, lines 37-57, FIGS. 3 and 4). Glass does not readily conduct electricity and consequently current flows through the gel. If the plates were metal, which readily conducts electricity, current would flow through the plates, not the gel, thus defeating the entire electrophoresis process. In short, metal is not compatible for an electrophoretic apparatus, as disclosed in Tuurenhout. One skilled in the art would realize that a minimally conductive surface must be used, and that metals are highly conductive and thus cannot be used in Tuurenhout.

8. Claims 1-5, 33, and 40-46 are rejected under 35 U.S.C. §103(a) as obvious over Boyce U.S. Patent No. 5,976,878 in view of Tuurenhout.

Applicant has amended independent claims 1, 33, and 40 to recite additional limitations to more sharply define over Boyce '878. In particular, claims 1, 33, and 40 have been amended to specifically recite rigid surfaces.

There is no teaching, motivation, or suggestion in Boyce '878 to any other surfaces except flexible, non-rigid materials, such as polytetrafluoroethylene (Teflon®) (FIG. 8, 27, 28 and column 8, lines 1-3). It would not be obvious to use rigid surfaces instead of the Boyce '878 flexible sheets, at least because there was no teaching or recognition that flexible sheets may result in a non-uniform biocompatible matrix (e.g., non-uniform matrix thickness). In contrast, the present application discloses that uniformity is required ("The apparatus and method of using the apparatus results in reproducible matrices each time the apparatus is used, so that reproducible devices are generated" instant application page 6, lines 20-22).

Flexible sheets permit free movement of the opposed surfaces of the membrane, such as occurs during freezing of the matrix when water in the matrix-forming solution expands. Thus further exacerbates the potential for matrix non-uniformity. In contrast, the use of rigid metal surfaces, as specifically recited in independent claims 1, 33, and 40, restricts the movement of the surfaces to result in a biocompatible matrix with more uniform thickness.

Applicant has amended independent claims 1, 33, and 40 as previously described, which applicant believes distinguishes applicant's invention over Boyce '878. Tuurenhout has been previously distinguished. For these reasons and those previously described, applicant respectfully asserts that Boyce '878 in view of Tuurenhout does not teach, motivate, or suggest applicant's invention. Thus, applicant asserts that that

independent claims 1, 33, and 40 are allowable and, for at least these reasons, dependent claims 2, 3, and 42 are allowable.


9. Claim 33 is rejected under 35 U.S.C. §103(a) as obvious over Boyce '878 in view of Kushner U.S. Patent No. 4,954,236. Applicant has amended claim 33 and, for the reasons previously described, asserts that Boyce does not teach, suggest, or motivate the invention. Thus, Boyce in combination with Kushner does not teach, motivate, or suggest applicant's invention. Consequently, Applicant submits that independent claim 33 is allowable.

### **CONCLUSION**

In view of the Amendments, as well as the foregoing remarks, applicant respectfully submits that this application is in complete condition for allowance and requests reconsideration.

Applicant does not believe any fee is due with this submission as it is being substituted upon request of the Examiner for the Amendment that was timely filed on February 1, 2005. However, the Examiner is authorized to charge any fee deficiency to Deposit Account No. 23-3000. The Examiner is invited to telephone the applicant's undersigned representative with any questions.

Respectfully submitted,  
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